AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A rotary joint for a multifunction pressure probe ~~(1)~~, comprising a fastening base ~~(11)~~ equipped with a bearing ~~(13)~~, a moving vane ~~(10)~~ free to rotate over a limited deflection and provided with a root ~~(12)~~ swiveling in the bearing ~~(13)~~ of the fastening base ~~(11)~~, pressure tap orifices ~~(15, 16)~~ located on the moving vane ~~(10)~~, pressure sensors placed on the outside of the moving vane ~~(10)~~ and air lines ~~(17, 21; 18, 22)~~ that connect the pressure tap orifices ~~(15, 16)~~ to the pressure sensors passing through the root ~~(12)~~ of the moving vane ~~(10)~~ and the bearing ~~(13)~~ of the fastening base ~~(11)~~, said rotary joint comprising ~~being characterized in that it includes~~ a plate ~~(23)~~, which can rotate relative to the root ~~(12)~~ of the moving vane ~~(10)~~ and is fastened to the fastening base ~~(11)~~ with respect to which it has a slight depth deflection, along the axis and at a distance from the bearing ~~(13)~~ that supports the moving vane ~~(10)~~, and lengths of flexible tubing ~~(21, 22)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ and constitute the air lines ~~(17, 21; 18, 22)~~ over part of their path going from the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ beyond which the pressure sensors are placed.

2. (Currently Amended) The rotary joint as claimed in claim 1, ~~characterized in that it~~ further comprising ~~includes~~ electrical wires ~~(32, 33)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ and form part of electrical connections going from the moving vane ~~(10)~~ to the body of the multifunction pressure probe ~~(1)~~.

3. (Currently Amended) The rotary joint as claimed in claim 1, further comprising ~~characterized in that it includes~~ a system for measuring the angular position of the moving vane ~~(10)~~ with means for correcting the measurement error due to the elastic stiffness estimated from the equation:

$$\alpha_v - \alpha = \frac{(\alpha - \alpha_0) R}{kV^2}$$

V being the air speed, kV2 the aerodynamic restoring force of the vane in the direction of the wind, α0 the neutral position of the vane and R the stiffness coefficient.

4. (Currently Amended) The rotary joint as claimed in claim 1, further comprising ~~characterized in that it includes~~ a system for measuring the angular position of the moving vane ~~(10)~~ with means for correcting the measurement error due to the elastic stiffness estimated from the equation:

$$\alpha_v - \alpha = K \frac{(\alpha - \alpha_0)}{(P_t - P_s)}$$

K being a coefficient measured in a wind tunnel, Pt the total pressure, Ps the static pressure and α0 the neutral position of the vane.

5. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the lengths of flexible tubing ~~(21, 22)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ are placed symmetrically with respect to the axis ~~(14)~~ of the bearing ~~(13)~~.

6. (Currently Amended) The rotary joint as claimed in claim 2, wherein ~~characterized in that~~ the electrical wires ~~(32, 33)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ are placed symmetrically with respect to the axis ~~(14)~~ of the bearing ~~(13)~~ and close to this axis ~~(14)~~.

7. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the lengths of flexible tubing ~~(21, 22)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ are made of a thermoplastic elastomer.

8. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the lengths of flexible tubing ~~(21, 22)~~ that connect the root ~~(12)~~ of the moving vane ~~(10)~~ to the plate ~~(23)~~ are made of a thermoplastic elastomer of the styrene/ethylene-butylene/styrene copolymer type modified with silicone oil.

9. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the slight deflection of the plate ~~(23)~~ is obtained by deformation of said plate ~~(23)~~, the latter being made of an elastic material that absorbs, by its deformation, some of the elongational forces undergone by the lengths of flexible tubing ~~(21, 22)~~ during the relative rotational movements between the root ~~(12)~~ of the moving vane ~~(10)~~ and the plate ~~(23)~~.

10. (Currently Amended) The rotary joint as claimed in claim 2, wherein ~~characterized in that~~ the slight deflection of the plate ~~(23)~~ is obtained by deformation of said

plate ~~(23)~~, the latter being made of an elastic material that absorbs, by its deformation, the elongational forces undergone by the electrical wires ~~(32, 33)~~ and also some of the elongational forces undergone by the lengths of flexible tubing ~~(21, 22)~~ during the relative rotational movements between the root ~~(12)~~ of the moving vane ~~(10)~~ and the plate ~~(23)~~.

11. (Currently Amended) The rotary joint as claimed in claim 9 ~~or claim 10~~, wherein ~~characterized in that~~ the plate ~~(23)~~ is made of rubber.

12. (Currently Amended) The rotary joint as claimed in claim 9 ~~or claim 10~~, wherein ~~characterized in that~~ the plate ~~(23)~~ is made of an elastomer.

13. (Currently Amended) The rotary joint as claimed in claim 9 ~~or claim 10~~, wherein ~~characterized in that~~ the plate ~~(23)~~ is made of a thermoplastic elastomer.

14. (Currently Amended) The rotary joint as claimed in claim 9 ~~or claim 10~~, wherein ~~characterized in that~~ the plate ~~(23)~~ is made of a thermoplastic elastomer of the styrene/ethylene-butylene/styrene copolymer type modified with silicone oil.

15. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the slight deflection of the plate ~~(23)~~ is obtained by a flexible fastening ~~(28, 29)~~ to the fastening base ~~(11)~~ that partly absorbs the elongational forces undergone by the lengths of flexible tubing ~~(21, 22)~~ during the relative rotational movements between the root ~~(12)~~ of the moving vane ~~(10)~~ and the plate ~~(23)~~.

16. (Currently Amended) The rotary joint as claimed in claim 2, wherein ~~characterized in that~~ the slight deflection of the plate ~~(23)~~ is obtained by a flexible fastening ~~(28, 29)~~ to the fastening base ~~(11)~~ that absorbs the elongational forces undergone by the electrical wires ~~(32, 33)~~ and also some of the elongational forces undergone by the lengths of flexible tubing ~~(21, 22)~~ during the relative rotational movements between the root ~~(12)~~ of the moving vane ~~(10)~~ and the plate ~~(23)~~.

17. (Currently Amended) The rotary joint as claimed in claim 1, wherein ~~characterized in that~~ the lengths of flexible tubing ~~(21, 22)~~ are slightly tensioned between the root ~~(12)~~ of the vane ~~(10)~~ and the plate ~~(23)~~.

18. (Currently Amended) The rotary joint as claimed in claim 2, wherein ~~characterized in that~~ the electrical wires ~~(32, 33)~~ are slightly tensioned between the root ~~(12)~~ of the vane ~~(10)~~ and the plate ~~(23)~~.

19. (Currently Amended) The rotary joint as claimed in claim 2, wherein ~~characterized in that~~ the electrical wires ~~(32, 33)~~ pass, on leaving the root ~~(12)~~ of the moving vane ~~(10)~~ through the plate ~~(23)~~, following, between the root ~~(12)~~ of the moving vane ~~(10)~~ and the plate ~~(23)~~, paths parallel to those of the lengths of flexible tubing ~~(21, 22)~~, these being symmetrical with respect to the axis ~~(14)~~ of the bearing (13).